Route 13/Wallops Island
Access Management Study

13

Recommended Conceptual Plans



prepared for
Virginia Department of Transportation

prepared by
Vanasse Hangen Brustlin, Inc.

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The study was completed for the Virginia Department of Transportation with the cooperation of many individuals and entities at the local, regional, state and federal levels. In particular, Vanasse Hangen Brustlin, Inc. wishes to acknowledge the dedication and guidance of the **Project Management Team** over the course of this study:

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Recommended Conceptual Plans

Introduction

The Virginia Department of Transportation (VDOT) identified the need to evaluate transportation deficiencies on U.S. Route 13 and portions of Route 175 on Virginia's Eastern Shore. The findings of this study are discussed in a companion document entitled Route 13/Wallops Island Access Management Study: Final Report. This document, Route 13/Wallops Island Access Management Study: Recommended Conceptual Plans, reflects the recommended improvements to U.S. Route 13 and Route 175 on aerial photography that are not provided in the Final Report.

To assist the reader in understanding the Recommended Conceptual Plans, a summary of the Final Report and the cost of the recommended improvements are presented in the following sections.

Study Goal

The goal of the study was to develop a plan that VDOT and the jurisdictions can implement to make U.S. Route 13 a safer and more efficient transportation facility for the traveling public over the next 20 years.

Existing Corridor Conditions

The evaluation of existing conditions along the U.S. Route 13 corridor examined the characteristics of the roadway and its users, addressed the seasonal variation, and identified key issues affecting travel along the corridor as summarized below.

Roadway

- U.S. Route 13 is a four-lane facility with no control of access.

- For most of its length, U.S. Route 13 has a median separating the northbound from the southbound directions of travel.

- There are several locations where the roadway is undivided with a center two-way left-turn lane. One location of particular concern is in Temperanceville where U.S. Route 13 is undivided with a three-foot flush median, curb/gutter, sidewalk, and numerous residences, driveways, and utility poles located on both sides of the road.

- The U.S. Route 13 corridor has a total of 21 traffic signals. With the exception of Exmore and Onley, signal spacing is not a concern. In these two towns, there is a concern about the addition of additional signals in the future.

Roadway Users

- The U.S. Route 13 corridor experiences a high volume of through traffic in both directions, ranging from 1,600 to 1,800 vehicles per day.

- There is a high volume of tractor-trailers, particularly in the northern portion of the U.S. Route 13 study area with poultry trucks moving to/from the Tyson's and Perdue plants to the north.

- Farm vehicles may be present on U.S. Route 13 for short stretches along most of the corridor throughout a long growing season.

- The U.S. Route 13 corridor is used by Eastern Shore residents for many different trip purposes including local trips, shopping trips, and work trips.

Safety

- Corridor crash rates are generally below the statewide average for similar primary routes, except in the towns of Exmore and Onley.

- Fatalities are a concern with a total of 24 fatalities recorded in the U.S. Route 13 corridor over the three-year analysis period (1997-1999). Of these fatalities, 40 percent occurred at night and 30 percent involved pedestrians.

- The proximity of obstructions to the roadway (i.e. utility poles, signs and structures) appears to be a contributing factor in 38 percent of these fatalities.

- Seventeen fatalities were recorded in the year 2000.

The ability of the Virginia State Police to effectively enforce existing traffic safety laws along the U.S. Route 13 corridor, given current staffing levels, was raised as a local concern.

Traffic Operations

- Based on existing traffic volumes, U.S. Route 13 operates at a good level of service. Unsignalized access onto U.S. Route 13 is difficult at many cross streets due to geometry deficiencies.

- The unsignalized intersection of Route 175 and Route 798 near the Wallops Island mainland complex during the summer months does not function at an adequate level of service and needs to be improved.

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Access

- A large number of access points (over 1,300) were identified throughout the U.S. Route 13 corridor. Many properties have multiple points of access.

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Median Crossovers

- The median width in many areas does not provide adequate protection for crossroad traffic.

- Crossover spacing needs to be reviewed and the provision of left-turn lanes should be considered at all of the crossovers.

- The crossover widths of many median crossovers (measured parallel to U.S. Route 13) are not wide enough to accommodate simultaneous left-turning traffic.

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Railroad

- The proximity of the Eastern Shore Railroad to U.S. Route 13, from Machipongo to Onley, impacts the safety of all crossroads connecting with U.S. Route 13 from the east.

- The upgrade of the rail line may impact these at-grade rail crossing as a result of the speeds increasing from 10 to 20 mph.

Land Use

- U.S. Route 13 is the primary access corridor for the entire Virginia Eastern Shore. The majority of daily trips require most residents to travel on U.S. Route 13 for both local and regional trip purposes.
- Active land uses along the U.S. Route 13 corridor include seasonal agriculture, and commercial/residential development in the towns and unincorporated settlements. Major commercial centers are located in Nassawadox, Exmore and Onley.
- In Accomack County, there are many schools located directly on, or close to, the U.S. Route 13 corridor. Access for school buses is a key concern.
- The Wallops Island area is a major employment center, attracting workers from both Virginia and Maryland. U.S. Route 13 is a major travel route serving this commuter population.
- The recently implemented reduced toll structure on the CBBT may have an impact on land use and development in Cape Charles and the entire southern portion of Northampton County.

Environment

Improvements in the U.S Route13 corridor could potentially impact sensitive environmental features particularly wetlands, prime farmland, and historic resources. Especially for improvements that involve roadway relocation or new alignment, additional investigations will be necessary to determine the extent and significance of such impacts.

Future Traffic Conditions

- Recent population projections show a relatively flat growth trend.
- Traffic volumes have continued to rise on U.S. Route 13. National transportation statistics support this rise in trip making activity.
- Given the potential for growth along the corridor, significant changes in land use development along U.S. Route 13 is likely to occur.

- By the year 2020, the U.S. Route 13 corridor will continue to operate at an overall good level of service.
- Side-street congestion is expected to occur at several unsignalized intersections, some of which may require signalization by 2020.
- Pockets of congestion are expected to occur at key signalized intersections, particularly at T's Corner, in Onley, and in Exmore.

Access Management Principles and Application to U.S. Route 13

Access Management has been defined as applying roadway and land use techniques to preserve the safety, function, and capacity of the U.S. Route 13 corridor. Successful access management requires that: 1) the roadway be improved by VDOT in accordance with the access management plan and 2) the localities implement land use controls in accordance with the access management plan.

Roadway Techniques

Access management techniques considered for the roadway network included:

- Construction of turn lanes
- Driveway spacing and consolidation
- Adequate corner clearances and sight distances
- Crossover spacing and consolidation
- Median type, median widening and crossover width
- Signal spacing and timing
- Frontage roads/reverse frontage roads
- Inter-parcel connections

Land Use Techniques

Included in the final Access Management Plan is a model Highway Corridor Overlay District (HCOD) ordinance. The HCOD is meant to apply to all developments abutting U.S. Route 13 and requiring site plan or subdivision review. The HCOD also applies to redevelopment projects. It addresses the number of access points, minimum corner clearances, minimum sight distances, outparcels, new subdivision

connections, median crossovers, shared access and reverse frontage. All developments generating more than 1,000 average daily trips covered by the HCOD shall prepare and submit a traffic impact analysis which address the following:

- Turn lane and access improvements
- Internal site circulation
- Shared access/access to adjacent sites
- Impacts to intersections and median crossovers
- Potential need for signalization
- Relationship of the proposal to the U.S. Route 13 Access Management Plan

Summary of Access Management Guidelines for the U.S. Route 13 Corridor

Criteria	Recommended Guidelines	Special Notes
Left-Turn Lanes	Construct at all full-access median crossovers	May not fully apply to directional crossovers
Two-Way Left-Turn Lanes	Provide 12 feet minimum, 14 feet desirable	Replace with non-traversible median when AADT exceeds 25,000 to 30,000 vehicles per day
Right-Turn Lanes	Require at all commercial entrances and side streets	Results in minimum lot frontage requirement
Shoulders	Widen/construct 10 feet wide min. outside and 3 feet min. median shoulders	Where residential driveway densities >10/mile, 12 feet min. outside shoulder
Driveway Spacing	400 feet minimum between commercial entrances	Results in minimum lot frontage requirement
Corner Clearance	U.S. Route 13 400 feet – upstream of cross street 250 feet – downstream of cross street	Vehicle storage needs may increase the 400-foot upstream requirement
	Cross Street 250 feet – upstream of U.S. Route 13 100 feet – downstream of U.S. Route 13	Use of restrictive median may reduce the 250-foot upstream requirement to 100 feet
Crossover Spacing	0.5 miles – full access 0.25 miles – directional access	Procedure needed for variances/modifications
Median Width	➤ Provide 50 feet minimum at major generators and cross streets by: ➢ Roadway widening ➢ Flare widening	Convert medians to directional access only or close median opening if median widening not feasible
	➤ Widen crossovers and lengthen left turn lanes at locations with heavy vehicle considerations (buses, tractor trailers)	Convert medians to directional access only or close median opening if median widening not feasible
Side-Street Connections	Counties require new development to provide secondary access to side-streets where feasible VDOT to construct new local road links	
Signal Spacing	Two miles in rural areas, 0.5 miles in developing areas, 0.25 miles in developed areas	
Signal Timing	Implement signal coordination in developed areas	
Clear Zone	Establish 30-foot recovery area beyond traveled way, where practical	In areas with curbing, min. clear zone can be reduced to 6 feet

Evaluation of Alternatives

This study first sought to recommend the implementation of basic safety and access management solutions, where practical. In those areas where access management techniques were deemed insufficient or not practical, other solutions were evaluated including reconstruction of intersections or the construction of bypasses.

Since this is a planning level study, potential impacts are discussed in general terms and based on existing database information. Minor right-of-way takings and impacts to abutting land uses were not assessed. Furthermore, field investigations should be conducted prior to any construction activities to ensure compliance with all appropriate local, state and federal rules and regulations.

Summary of Alternatives Evaluation

The following table summarizes the alternatives considered by this study.

	Crossover Closure	Median Widening	Turn Lane Improve	Mainline Realign	12-Foot Shoulder	Frontage Roads	Wetland Impact	Clear Zone	Bypass Length	Cost (Millions)
Route 175										
Alt 1–Existing	N/A	6,900 ft.	6	N/A	67,200 ft.		11.3 ac			$6.1
Alt 2–New Alignment	N/A	N/A	5	N/A	None		22.1 ac		19,000 ft.	$14.5
US Route 13 Oak Hall & Temperanceville										
Oak Hall Alt 1 (Existing)	6	7,650 ft.	7	2,400 ft.	8,600 ft.					$4.5
Oak Hall Alt 2 (East Bypass)	2		2				34.4 ac		11,800 ft.	$10.2
Temperanceville Alt 1 (Existing)	5	5,600 ft.	3	4,300 ft.	8,750 ft.					$5.6
Temperanceville Alt 2 (West Bypass)	1		3				1.6 ac		9,300 ft.	$10.4
Temperanceville Alt 3 (East-South Bypass)	2		3				2.7 ac		4,600 ft.	$6.6
Combined Alternatives										
Alt 4–West Bypass of Oak Hall & Temperanceville	1		4				38.5 ac		22,000 ft.	$25.0
Alt 5–Alt 4 with Interchange	1		4				38.5 ac		22,000 ft.	$28.9
Intersection of US Route 13 and Route 175										
At-grade	1		1							
High-capacity Intersection	1		1							
Interchange	1		1							

	Crossover Closure	Median Widening	Turn Lane Improve	Mainline Realign	2-Foot Shoulder	Frontage Roads	Wetland Impact	Clear Zone	Bypass Length	Cost (Millions)
Mappsville & Nelsonia										
Mappsville Alt 1 (Existing)	5	8,400 ft.	4	2,800 ft.	12,400 ft.					$6.4
Mappsville Alt 2 (West Bypass)	0		2				12.0 ac		8,800 ft.	$8.4
Nelsonia Alt 1 (Existing)	4	6,400 ft.	5	2,800 ft.	6,000 ft.		0.2 ac			$4.9
Nelsonia Alt 2 (East Bypass)	2		3				14.1 ac		11,600 ft.	$8.2
Mappsville & Nelsonia Alt 3 (Joint Bypass)	1		6				26.1 ac		20,400 ft.	$16.6
Mary N. Smith	1	9,600 ft.	4	9,600 ft.		2,000 ft.				$7.0
Whispering Pines	2	900 ft.	1	900 ft.				4,100 ft.		$1.1
Onley	1		5							$2.0
Melfa/Keller/Painter										
Alt 1–Shift RR within Town	4	22,000 ft.	12		11,400 ft.					$15.2
Alt 2–Shift RR outside Town	4	36,950 ft.	12		28,300 ft.		10.6 ac			$30.6
Exmore										
Alt 1–Connector Bayside Rd to Broadwater Rd	1		6							$1.8
Alt 2–Alt 1 plus Relocate Signal Shore Plaza Signal	2		7							$2.8
Nassawadox										
Alt 1–Shift RR within Town	2	6,250 ft.	3		6,250 ft.					$4.4
Alt 2–Shift RR Outside Town	2	6,250 ft.	3		6,250 ft.		1.5 ac			$7.0
Machipongo										
Alt 1–Route 627 Consolidate Median at Clam Shack	3	3,400 ft.	4	3,400 ft.				1,400 ft.		$4.3
Alt 2–Route 627 Consolidate Median at Young St	3	3,400 ft.	3	3,400 ft.				1,200 ft.		$4.2
Alt 3–New Local Connection to Route 618	4	3,400 ft.	5	3,400 ft.				1,200 ft.		$5.0
Alt 4–Variant of Alt 3 (Young St Open)	4	3,400 ft.	5	3,400 ft.				1,200 ft.		$4.9
Alt 5 Route 627 Consolidate Median near Chevon	3	3,400 ft.	3	3,400 ft.				1,400 ft.		$4.5
Martin Siding										
Alt 1–Frontage & Reverse Frontage Roads	2		3			1,000 ft.				$2.0
Alt 2–Realign US Route 13 & Construct Frontage Rds	2	1,200 ft.	3	1,200 ft.		1,100 ft.				$1.1
Route 184 Intersection										
Alt 1–Interchange & Grade Separation of RR	5		5	4,500 ft.						$17.2
Alt 2–Intersection Improve & Grade Separation of RR	2		4	3,000 ft.						$11.1
Cape Center	5	3,100 ft.	2	3,100 ft.						$3.0
Kiptopeke Road	2	2,400 ft.	2	2,400 ft.						$3.1

Study Recommendations

To improve the efficiency and safety of the U.S. Route 13 corridor, this plan first recommends that VDOT implement the Access Management Guidelines set forth by this study. Second, this plan recommends that each locality along the corridor adopt the Highway Corridor Overlay District that was developed by this study. Finally, a series of roadway and safety improvements are recommended based on the alternatives analysis and public input process. The improvements are summarized as follows:

Corridor-wide Actions

Policy Actions

- Adoption of U.S. Route 13 Access Management Guidelines by VDOT
- Adoption of Highway Corridor Overlay District Ordinance by Localities
- Adoption of Recommended Concept Plan to guide future access decisions

Physical Improvements

- 10-foot outside shoulders on U.S. Route 13 as a minimum
- Rumble strips – outside and inside shoulders
- Raised pavement markers – center line only at 80-foot spacing
- Milepost markers – every mile
- Relocation or Removal of Hazards in Clear Zone
- Drainage Grate Reconstruction in Median – 202 total structures
- Move/consolidate crossovers – 70 locations
- Turn lane improvements at major intersections

Location and Study Recommendations

Maryland State Line to Route 175

- Clear vegetation in clear zone north of Route 710, near Welcome Center
- Provide 12-foot shoulder on southbound U.S. Route 13 through New Church

- Localized median widening – U.S. Route 13 at Route 710 in New Church
- Realign Route 704 (east) intersection with U.S. Route 13
- Localized median widening – U.S. Route 13 at Route 704

Route 175 to Route 692 (Oak Hall and Temperanceville)

- Construct improved intersection on U.S. Route 13 at Route 175
- Construct four-lane, divided bypass between Route 175 and Route 692
- Realign Route 702 intersection with U.S. Route 13
- Clear vegetation in clear zone north of Route 692

Route 692 to Route 729 (Mappsville)

- Provide 12-foot shoulders on northbound U.S. Route 13 between Route 692 and Route 691
- Localized median widening – U.S. Route 13 at Route 691
- Construct median through Mappsville
- Provide 12-foot shoulders on northbound and southbound U.S. Route 13 through Mappsville
- Realign Route 689 intersection with U.S. Route 13

Route 729 to Route 681 (Nelsonia)

- Provide 12-foot shoulders on northbound and southbound U.S. Route 13 through Nelsonia
- Construct medial through Nelsonia
- Realign Route 681 intersection with U.S. Route 13

Route 681 to Route 679

- Localized median widening – U.S. Route 13 at Route 680
- Localized median widening – U.S. Route 13 at Route 738
- Construct reverse frontage road – northbound at Route 738

Route 679 to Route Business 13/ Route 663 (Mary N. Smith Area)

- Realign Route 679 intersection with U.S. Route 13
- Construct median in North Accomac area, between Route 661 and Route 663
- Improve roadway alignment and widen median from Route 661 to Route 663
- Construct one-way frontage roadson southbound U.S. Route 13 at two locations

Business 13/Route 663 to Route 639 (Accomac and Onley)

- Clear vegetation in clear zone between Route 662 and Business 13
- Realign Business Route 13 and Route 659 at Whispering Pines
- Construct reverse frontage road – northbound at Route 648
- Construct access road between Route 179 and Chesapeake Square Shopping Center
- Construct two-way frontage road – northbound at Route 1616
- Localized median widening – U.S. Route 13 at Route 680 (Nandua HS)
- Provide 12-foot shoulders on southbound U.S. Route 13 north of Route 639

Route 639 to Route 607 (Melfa, Keller, Painter)

- Relocate railroad right-of-way in Melfa, Keller and Painter to the east to allow for roadway widening
- Construct 16-foot-wide median through Melfa, Keller and Painter
- Localized median widening – U.S. Route 13 north and south of Melfa
- Construct directional median access at community college
- Realign Route 734 (east) to intersect with industrial park access
- Localized median widening – U.S. Route 13 north and south of Keller
- Localized median widening – U.S. Route 13 at Central Middle School

Route 607 to Route 618 (Exmore)

- Localized median widening – U.S. Route 13 at Bundick's Kuzzen's
- Provide 12-foot shoulder on southbound U.S. Route 13 north of Route 181
- Construct access road to serve Food City plaza and Trawler restaurant
- Construct local road connection between Route 618 and Route 652
- Future relocation of existing traffic signal

Route 618 to Route 617 (Nassawadox)

- Provide 12-foot shoulder on southbound U.S. Route 13 through Nassawadox
- Relocate railroad right-of-way in Nassawadox to the east to allow for roadway widening
- Localized median widening – U.S. Route 13 through Nassawadox

Route 617 to Route 628 (Treherneville and Machipongo)

- Construct one-way frontage road on southbound U.S. Route 13 in Weirwood
- Clear vegetation in clear zone between Route 617 and Route 620
- Construct one-way frontage road on southbound U.S. Route 13 in Treherneville
- Construct access road between Route 622 and Route 625
- Provide 12-foot shoulder on southbound U.S. Route 13 south of Route 622
- Localized median widening – U.S. Route 13 at Route 627
- Realignment of Young Street (Route 627)

Route 628 to 630 (Martin Siding)

- Construct one-way frontage road on southbound U.S. Route 13 in Martins Siding
- Construct one-way frontage road on northbound U.S. Route 13 in Martins Siding
- Localized median widening – U.S. Route 13 at Route 1701
- Clear vegetation in clear zone between Route 1703 and Route 630

- Localized median widening – U.S. Route 13 at Route 630

Route 630 to Route 642 (Cape Charles)

- Construct interchange on U.S. Route 13 at Route 184
- Construct access road between Route 642 at Food Lion Shopping Center

Route 642 to Route 624 (Cape Center)

- Localized median widening – U.S. Route 13 at Route 684 (Kiptopeke ES)
- Construct one-way frontage road on northbound U.S. Route 13 between Route 643 and Route 644
- Construct one-way frontage road on southbound U.S. Route 13 between Route 643 and Route 644
- Localized median widening – U.S. Route 13 at Cape Center
- Construct reverse frontage road – northbound at Cape Center

Route 624 to Route 600 (Kiptopeke)

- Clear vegetation in clear zone between Route 624 and Route 646
- Provide 12-foot shoulder on southbound U.S. Route 13 north of Route 646
- Localized median widening – U.S. Route 13 at Route 645
- Close Route 704 access onto U.S. Route 13
- Construct access road improvements on Route 645

Route 175 from U.S. Route 13 to Mosquito Creek

- Provide left-turn lanes as needed between U.S. Route 13 at Route 798
- Provide 12-foot shoulder on eastbound and westbound Route 175

The study recommendations are projected to cost a total of **$139.3 million** (current dollars), with approximately 60 percent of the improvements occurring in Accomack County and the remaining 40 percent occurring in Northampton County.

Costs

The study recommendations are projected to cost a total of **$139.3 million** (current dollars), with approximately 60 percent of the improvements occurring in Accomack County and the remaining 40 percent occurring in Northampton County.
Table A-1 reflects the unit costs used to develop the recommended costs. Table A-2 documents the probably costs by milepost of the recommended improvements.

Table A-1
Unit Costs

Item	Unit	Cost
New 4-lane rural highway NIC R/W	mile	$3,700,000.00
Widen highway, one lane each direction, NIC R/W	mile	$2,000,000.00
New pavement area, square foot cost, NIC R/W	square foot	$20.00
Paved shoulders, 10 feet right side, 3 feet left side, both directions	mile	$175,000.00
Paved shoulder square foot cost	square foot	$1.28
Pavement removal	square foot	$1.50
Clear zone improvement (assume 20-foot clearing x dist)	linear foot	$3.90
Rumble strips, left and right, north and south. Not in town limits	mile	$4,000.00
One turn lane, 200 feet w/ 200-foot taper, shoulder section	each	$56,000.00
one turn lane, 350 feet w/ 200-foot taper, shoulder section	each	$84,000.00
Median crossover closing (pavement removal, ditch restoration)	each	$5,000.00
Railroad relocation 20-foot offset, NIC R/W	mile	$500,000.00
Railroad relocation new alignment, NIC R/W	mile	$1,100,000.00
Right-of-way town	square foot	$0.25
Right-of-way farm	square foot	$0.12
Right-of-way timber	square foot	$0.02
House	each	$75,000.00
Milepost markers	each	$110.00
Milepost markers (north and south, entire corridor length)	lump sum	$15,000.00
Pavement markers ($50ea @ 80-foot spacing, only on centerline)	mile	$3,300.00
Pavement markers (reflectors, north and south, entire corridor length)	lump sum	$450,000.00
Move Utility poles	each	$5,000.00
Move Utility poles (300-foot spacing, 18 per mile)	mile	$88,000.00
Drainage inlet tops, Northampton (82- 80%@$1,000; 20%@$10,000)	lump sum	$226,000.00
Drainage headwalls, Northampton (10- 80%@$500; 20%@$5,000)	lump sum	$14,000.00
Drainage inlet tops, Accomac (120- 80%@ $1,000; 20%@$10,000)	lump sum	$562,000.00
Drainage headwalls, Accomac (50- 80%@$500; 20%@$5,000)	lump sum	$70,000.00

Table A-2
Summary of Recommended Improvement Costs

Accomack County		
Milepost		Opinion of
From	To	Probable Cost
U.S. Route 13		
138	137	$630,000
137	136	$2,200,000
136	135	$305,000
135	134	$3,200,000
134	133	$93,000
133	132	$3,720,000
132	131	$3,825,000
131	130	$4,360,000
130	129	$5,270,000
129	128	$1,256,000
128	127	$2,500,000
127	126	$3,413,000
126	125	$4,575,000
125	124	$900,000
124	123	$2,735,000
123	122	$2,336,000
122	121	$1,375,000
121	120	$1,570,000
120	119	$973,000
119	118	$3,483,000
118	117	$3,404,000
117	116	$1,165,000
116	115	$474,000
115	114	$1,040,000
114	113	$1,301,000
113	112	$1,107,000
112	111	$2,506,000
111	110	$463,000
110	109	$1,870,000
109	108	$3,756,000
108	107	$1,128,000
107	106	$4,007,000
106	105	$2,606,000
105	104	$1,174,000
104	103	$420,000
103	102	$1,811,000
102	101	$523,000
Route 175 between U.S. Route 13 and Mosquito Creek		$6,100,000
Total Accomack County		**$83,574,000**

Northampton County		
Milepost		Opinion of
From	To	Probable Cost
U.S. Route 13		
101	100	$1,149,000
100	99	$560,000
99	98	$1,960,000
98	97	$131,000
97	96	$712,000
96	95	$2,971,000
95	94	$1,152,000
94	93	$769,000
93	92	$381,000
92	91	$1,990,000
91	90	$1,482,000
90	89	$4,357,000
89	88	$1,921,000
88	87	$546,000
87	86	$1,653,000
86	85	$193,000
85	84	$1,065,000
84	83	$424,000
83	82	$361,000
82	81	$193,000
81	80	$463,000
80	79	$20,155,000
79	78	$1,216,000
78	77	$1,251,000
77	76	$259,000
76	75	$2,839,000
75	74	$811,000
74	73	$814,000
73	72	$3,200,000
72	71	$239,000
71	70	$351,000
70	69	$127,000
Total Northampton County		**$55,695,000**

Action Plan

An "Action Plan" for implementation of a short-term improvement program was developed.Short-term improvements have been identified that address existing safety concerns and/or begin to implement the access management guidelines.

Summary of Short-term Recommendations

Recommended Action	Milepost Location	Cost by County	
		Accomack	Northampton
Corridor-wide Actions			
Adoption of Access Management Guidelines	NA	NA	NA
Adoption of Highway Corridor Overlay District Ordinances by localities	NA	NA	NA
Adoption of Recommended Concept Plan	NA	NA	NA
Install rumble strips in outside shoulders	NA	$ 74,000	$ 64,000
Install raised pavement markers in center dashed line only at 80 feet spacing	NA	$ 242,000	$ 208,000
Install milepost markers – every mile	NA	$ 8,000	$ 7,000
Drainage grate reconstruction in median at 120 Accomack and 82 Northampton locations	NA	$ 562,000	$ 226,000
Headwalls – 50-Accomack and 10-Northampton	NA	$ 70,000	$ 14,000
Turn-Lane Improvements	NA	$ 500,000	$ 500,000
Site-specific Actions – Accomack County			
Clear vegetation within clear zone			
— North of Route 710 near the Welcome Center	138-136	$ 26,500	
— North of Route 692	129	$ 6,500	
— Between Route 662 and Business 13/Route 659	117-115	$ 31,500	
Intersection improvement – Route 175 at Route 679		$ 300,000	
Intersection improvement – Route 175 at Route 798		$ 300,000	
Localized median widening – U.S Route 13 at Route 738		$ 750,000	
Construct of reverse frontage road – Route 738		$ 250,000	
Site-specific Actions – Northampton County			
Clear vegetation within clear zone			
— Between Route 617 and Route 620	94-92		$ 10,500
— Between Route 703 and Route 630	88-87		$ 18,800
— Between Route 624 and Route 646	75-73		$ 18,000
Construct one-way frontage road – south of Route 628	89-88		$ 575,000
Localized median widening – U.S. Route 13 at Route 684	78		$2,250,000
Total Short-term Improvements Cost		**$3,120,500**	**$3,891,300**

Conceptual Improvements

The following includes 15 graphical pages which provide the Summary of Roadway Improvements followed by 80 sheets of aerial photographs of the U.S. Route 13 and Route 175 corridors with the conceptual recommendations overlayed.

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